

Appl. No. 10/824,357
Amendment dated May 15, 2008
Response to the Office Action of November 15, 2007

IN THE CLAIMS:

This listing of claims below will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claim 1. (currently amended) A method for treating or preventing pain comprising administering to a subject in need of pain treatment or pain prevention

- a) one or more analgesics, wherein said analgesic is ~~selected from the group consisting of opioids, NSAIDs, COX-2 inhibitors, acetaminophen, and tramadol~~ an opioid; and
- b) one or more beta adrenergic agonists in an amount effective to provide, ~~wherein said beta adrenergic agonist produces an enhanced effect of said analgesic; provided that said enhanced effect of said analgesic does not include NSAID-induced gastrointestinal injury.~~

Claim 2. (original) The method of claim 1, wherein said analgesic is administered prior to the administration of said beta adrenergic agonist.

Claim 3. (original) The method of claim 1, wherein said analgesic is administered after the administration of said beta adrenergic agonist.

Claim 4. (original) The method of claim 1, wherein said analgesic is administered concurrently with said beta adrenergic agonist.

Claim 5. (original) The method of claim 1, wherein said enhanced effect is a faster onset of action.

Claim 6. (original) The method of claim 1, wherein said enhanced effect is an

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increased duration of action.

Claim 7. (original) The method of claim 1, wherein said enhanced effect is a reduction of one or more side effects of said analgesic.

Claim 8. (original) The method of claim 1, wherein said effect is an increased maximal analgesic effect of said analgesic.

Claim 9. (original) The method of claim 1, wherein said analgesic is administered in a subanalgesic amount.

Claim 10. (currently amended) The method of claim 1, wherein said beta adrenergic agonist is administered in a an amount from about 0.001 mg to about 400 mg subanalgesic amount.

Claim 11. (original) The method of claim 1, wherein said beta adrenergic agonist is administered in an amount sufficient to reduce analgesic tolerance.

Claim 12. (original) The method of claim 1, wherein said beta adrenergic agonist is administered in an amount sufficient to reduce opioid dependence.

Claim 13. (currently amended) The method of claim 1, wherein said beta adrenergic agonist is administered in an amount sufficient to reduce side effects of said analgesic, ~~wherein said analgesic is an opioid or acetaminophen.~~

Claim 14. (currently amended) The method of claim 1, wherein said ~~analgesic opioid~~ is selected from the group consisting of COX-2 inhibitors, ~~opioid, acetaminophen, and tramadol.~~

Claim 15. (cancelled)

Claim 16. (cancelled)

Claim 17. (cancelled)

Claim 18. (cancelled)

Claim 19. (cancelled)

Claim 20. (currently amended) The method of claim 1, wherein said beta adrenergic agonist is selected from the group consisting of bitolterol, broxaterol, cimaterol, clenbuterol, colterol, fenoterol, fomoterol, formoterol, isoetharine, isoproterenol (isoprenaline), isoxsuprine, mabuterol, metaproterenol, orciprenaline, picumeterol, procaterol, ractopamine, reproterol, rimiterol, ritodrine, salbutamol (albuterol), salmeterol, terbutaline, and zinterol, and combination thereof.

Claim 21. (currently amended) The method of claim 20, wherein said beta adrenergic agonist is selected from the group consisting of albuterol, isoproterenol, and terbutaline, and combination thereof.

Claim 22. (original) The method of claim 21, wherein said beta adrenergic agonist is albuterol.

Claim 23. (original) The method of claim 1, wherein said subject is a mammal.

Claim 24. (original) The method of claim 23, wherein said mammal is a human.

Claim 25. (original) The method of claim 1, wherein said analgesic and said beta adrenergic agonist are administered to said subject by a route selected from the group consisting of oral, subcutaneous, intravenous, intramuscular, topical, transdermal,

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transmucosal, buccal, inhalation, epidural, intrathecal, rectal, intrarticular, and ocular.

Claim 26. (original) The method of claim 25, wherein said beta adrenergic agonist is administered orally.

Claim 27. (original) The method of claim 26, wherein said analgesic is administered orally.

Claim 28. (original) The method of claim 1, wherein said analgesic and said beta adrenergic agonist are administered as a single pharmaceutical composition.

Claim 29. (original) The method of claim 1, wherein said analgesic and said beta adrenergic agonist are administered as separate pharmaceutical compositions.

Claim 30. (original) The method of claim 1, wherein said analgesic and said beta adrenergic agonist are coadministered as a sustained release dosage form.

Claim 31. (currently amended) The method of claim 1, wherein said beta agonist is administered in an amount of from about 0.001 to 400 mg, preferably 0.01 mg to about 40 mg per dose, preferably 0.1 mg to about 4 mg per dose.

Claims 32-40. (cancelled).

Claim 41. (new) The method of claim 1, wherein said analgesic and said beta adrenergic agonist are administered to said subject by a route selected from the group consisting of oral, intravenous, epidural and intrathecal.

Claim 42. (new) The method of claim 1, wherein said opioid is selected from the group consisting of hydromorphone, codeine, fentanyl, hydrocodone, levorphanol, buprenorphine, butorphanol, nalbuphine, oxymorphone oxycodone, and combination

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thereof.

Claim 43. (new) The method of claim 1, wherein said opioid is selected from the group consisting of anileridine, buprenorphine, butorphanol, codeine, dezocine, diamorphine, dihydrocodeine, fentanyl, hydrocodone, hydromorphone, levorphanol, meperidine, meptanzinol, methadone, morphine, nalbuphine, oxycodone, oxymorphone, pentazocine, propoxyphene, propiram, their pharmaceutically acceptable salts, and combination thereof.

Claim 44. (new) The method of claim 1, wherein said beta adrenergic agonist is administered in an amount from about 0.1 mg to about 4 mg.

Claim 45. (new) The method of claim 1, wherein said beta adrenergic agonist is administered in an amount from about 0.25 mg/kg to about 20 mg/kg.

Claim 46. (new) The method of claim 1, wherein said opioid is morphine administered in an amount from about 0.3125 mg/kg to about 10 mg/kg and the beta adrenergic agonist is albuterol administered in an amount from about 0.25 mg/kg to about 20 mg/kg.

Claim 47. (new) The method of claim 1, wherein said opioid is morphine parenterally administered in an amount from about 0.5 mg to about 24 mg and the beta adrenergic agonist is albuterol administered in an amount from about 0.001 mg to about 400 mg.

Claim 48. (new) The method of claim 1, wherein said opioid is morphine administered orally in an amount from about 5 mg to about 120 mg and the beta adrenergic agonist is albuterol administered in an amount from about 0.001 mg to about 400 mg.

Claim 49. (new) The method of claim 1, wherein said opioid is administered orally and is selected from the group consisting of Anileride in an amount from about 10 mg to about 75 mg, Buprenorphine in an amount from about 0.15 mg to about 8 mg, Butorphanol in an amount of from about 0.5 mg to 10 mg, Codeine in an amount from about 15 mg to about 120 mg, Dezocine in an amount from about 1.5 mg to about 30 mg, Diamorphine in an amount from about 1 mg to about 20 mg, Dihydrocodeine in an amount from about 10 mg to about 120 mg, Hydrocodone in an amount from about 2.5 mg to about 120 mg, Hydromorphone in an amount from about .5 mg to about 24 mg, Levorphanol in an amount from about 0.5 mg to about 10 mg, Meperidine in an amount from about 25 mg to about 150 mg, Meptazinol in an amount from about 100 mg to about 400 mg, Methadone in an amount from about 2 mg to about 30 mg, Morphine in an amount from about 5 mg to about 120 mg, Oxycodone in an amount from about 2.5 mg to about 60 mg, Oxymorphone in an amount from about 5 mg to about 60 mg, Pentazocine in an amount from about 25 mg to about 100 mg, Propiram in an amount from about 25 mg to about 150 mg, Propoxyphene in an amount from about 65 mg to about 200 mg and Tramadol in an amount from about 25 mg to about 400 mg and wherein the beta adrenergic agonist is in an amount of 0.001 mg to about 400 mg.

Claim 50. (new) The method of claim 1, wherein said opioid is administered parenterally and is selected from the group consisting of Anileride in an amount from about 10 mg to about 75 mg, Buprenorphine in an amount from about 0.15 mg to about 8 mg, Butorphanol in an amount of from about 0.5 mg to 10 mg, Codeine in an amount from about 15 mg to about 60 mg, Dezocine in an amount from about 3 mg to about 30 mg, Diamorphine in an amount from about 1 mg to about 20 mg, Dihydrocodeine in an amount from about 10 mg to about 120 mg, Fentanyl in an amount from about 0.05 mg to about 0.25 mg, Hydrocodone in an amount from about 2.5 mg to about 120 mg, Hydromorphone in an amount from about 0.2 mg to about 10 mg, Levorphanol in an amount from about 0.25 mg to about 8 mg, Meperidine in an amount from about 25 mg to about 150 mg, Meptazinol in an amount from about 50 mg to about 200 mg, Methadone in an amount from about 2 mg to about 30 mg, Morphine in an amount from

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about 0.5 mg to about 24 mg, Nalbuphine in an amount from about 5 mg to about 40 mg, Oxycodone in an amount from about 0.5 mg to about 20 mg, Oxymorphone in an amount from about 0.5 mg to about 5 mg, Pentazocine in an amount from about 25 mg to about 100 mg, Propiram in an amount from about 25 mg to about 150 mg, and Tramadol in an amount from about 25 mg to about 400 mg, and wherein the beta adrenergic agonist is in an amount of 0.001 mg to about 400 mg.

Claim 51. (new) The method of claim 1, wherein said opioid is morphine in an amount from about 0.3125 mg/kg to about 10 mg/kg or a therapeutically equivalent dose of an opioid other than morphine.

Claim 52. (new) The method of claim 1, wherein said beta adrenergic agonist is used as a racemic mixture.

Claim 53. (new) The method of claim 1, wherein said beta adrenergic agonist is used as a single stereoisomer.

Claim 54. (new) The method of claim 1, wherein said beta adrenergic agonist is used as a mixture of stereoisomers containing unequal amounts of stereoisomers.

Claim 55. (new) The method of claim 1, wherein the form of said analgesic is selected from the group consisting of a racemic mixture, unequal mixtures of stereoisomers, a mixture of stereoisomers containing substantially more of one stereoisomer than other stereoisomers and a substantially pure single stereoisomer.